

Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

Claims 1-34. (canceled)

Claim 35. (currently amended) A product comprising a high purity isoflavone enriched fraction produced by a process comprising the steps of:

(a) subjecting plant material to a primary chromatographic step to obtain an isoflavone enriched fraction; and

(b) subjecting the isoflavone enriched fraction of step (a) to a secondary chromatographic step, thereby producing a high purity isoflavone enriched fraction,

wherein said high purity isoflavone enriched fraction has a purity in a range of about 70% to about 100%.

Claim 36. (new) The product of claim 35, wherein said high purity isoflavone enriched fraction has a purity in a range of about 70% to about 95%.

Claim 37. (new) The product of claim 36, wherein said high purity isoflavone enriched fraction has a purity in a range of about 80% to about 95%.

Claim 38. (new) The product of claim 37, wherein said high purity isoflavone enriched fraction has a purity of about 90%.

Claim 39. (new) The product of claim 35, wherein said high purity isoflavone enriched fraction has a purity in a range of greater than 90%.

Claim 40. (new) The product of claim 35, wherein said plant material is aqueous.

Claim 41. (new) The product of claim 35, wherein said plant material is selected from a group consisting of soy molasses and soy whey.

Claim 42. (new) The product of claim 35, wherein said plant material is heated.

Claim 43. (new) The product of claim 42, wherein the temperature of said heat is in a range of about 65° C to about 95° C.

Claim 44. (new) The product of claim 35, wherein prior to step (a), said plant material is passed through an ultrafiltration membrane which has a molecular weight cut-off range that produces a plant material permeate containing at least one isoflavone fraction.

Claim 45. (new) The product of claim 44, wherein said ultrafiltration membrane has a nominal molecular weight cut-off in a range of about 600 to about 1,000,000.

Claim 46. (new) The product of claim 45, wherein said molecular weight cut-off is about 100,000.

Claim 47. (new) The product of claim 35 wherein said primary and said secondary chromatographic steps use an adsorptive material which is selected from the group consisting of an ionic resin and a non-ionic resin.

Claim 48. (new) The product of claim 47, wherein said ionic resin is selected from the group consisting of ionic divinyl-benzene copolymer, ionic ethylvinylbenzene-divinyl-benzene copolymer, and ionic styrene-divinyl-benzene copolymer, ionic polystyrene.

Claim 49. (new) The product of claim 47, wherein said non-ionic resin is selected from the group consisting of non-ionic divinyl-benzene copolymer, non-ionic ethylvinylbenzene-divinyl-benzene copolymer, non-ionic styrene-divinyl-benzene copolymer and non-ionic polystyrene.

Claim 50. (new) The product of claim 35, wherein said primary chromatographic step is a continuous process, using a plurality of liquid chromatography columns wherein at least one of said columns is loading while another of at least one of said columns is washing while another of at least one of said columns is eluting.

Claim 51. (new) The product of claim 35, wherein said secondary chromatographic step is a continuous process, using a plurality of liquid chromatography columns wherein at least one of said columns is loading while another of at least one of said columns is washing while another of at least one of said columns is eluting.

Claim 52. (new) The product of claim 35, wherein said secondary chromatographic step is followed by a process of evaporation.

Claim 53. (new) The product of claim 52, wherein crystals are produced by said process of evaporation.

Claim 54. (new) The product of claim 52, wherein said process of evaporation is followed by a process selected from the group consisting of decanting, hydrocloning, centrifuging and filtering.

Claim 55. (new) The product of claim 52, wherein solids are produced by said process of evaporation.

Claim 56. (new) The product of claim 55, wherein the range of said solids in said high purity isoflavone fraction is of about 1 to about 20%.

Claim 57. (new) The product of claim 52, wherein said process of evaporation is followed by a process of reverse osmosis.

Claim 58. (new) The product of claim 57, wherein said process of reverse osmosis is carried out at a temperature in a range of about 65°C to about 95°C.

Claim 59. (new) The product of claim 57, wherein said process of reverse osmosis is followed by a process of concentration to produce an isoflavone enriched product.

Claim 60. (new) The product of claim 59, wherein said isoflavone enriched product has an isoflavone concentration in a range of about 40% to about 90% on a dry weight basis.

Claim 61. (new) The product of claim 59, wherein said isoflavone enriched product has an isoflavone concentration in a range of about 90% to about 100% on a dry weight basis.

Claim 62. (new) The product of claim 35, wherein said high purity isoflavone enriched fraction is dried.

Claim 63. (new) The product of claim 62, wherein said drying is carried out by a process selected from the group consisting of spray drying, vacuum belt drying and freeze drying.

Claim 64. (new) The product of claim 62, wherein said drying is followed by a process selected from the group consisting of centrifuging and filtering.

Claim 65. (new) The product of claim 35, wherein said high purity isoflavone enriched fraction is cooled.

Claim 66. (new) The product of claim 65, wherein the temperature of said cooling is in a range of about 4°C to about 45°C.

Claim 67. (new) The product of claim 66, wherein said high purity isoflavone is centrifuged.

Claim 68. (new) The product of claim 67, wherein said centrifugation is at about 900 x g.